

Amendments to the Drawings:

The attached sheets of drawings include changes to Figs. 1-7. These sheets replace the original sheets of Figs. 1-7. Applicants have amended Figs 1-7 to be labeled as "Prior Art".

Attachment: Replacement Sheets (labeled accordingly)

REMARKS/ARGUMENTS

Status of Claims

Claims 1-42 are pending in this application. All claims are original. As demonstrated below, all claims contain subject matter which is not disclosed, taught or made obvious by the cited art.

Rejection of claims 1-42 under 35 USC § 101

The Applicants traverse this rejection.

For Claims 1-17 and 37-42, the Examiner alleges that “the claims disclose a process (method) that manipulates only number, abstract concepts or ideas or representing any of the foregoing, the claim are not being applied to an appropriate subject matter.” The Examiner also points to MPEP § 2106 for further guidance. However, Applicants have carefully reviewed the Examiner’s allegation and MPEP § 2106, and respectfully submit that the rejection under 35 USC § 101 is improper. Applicants assert that the claims describe patentable subject matter because the claimed features present more than mere manipulation of numbers, abstract concepts or ideas and are applied to an appropriate subject matter.

According to the MPEP § 2106, the burden is on the USPTO to set forth a prima facie case of unpatentability. If the USPTO personnel can establish a prima facie case that a claim does not fall into a statutory category, the patentability analysis does not end there. *See MPEP §2106(IV)(B)*. Assuming arguendo that the claims may not fall within one of the four enumerated categories or patentable subject matter recited in 35 USC § 101, the Examiner must also consider if the claims cover either a 35 USC § 101 judicial exception or a practical application of 35 USC § 101 judicial exception. *See MPEP 2106(IV)(C)(1)*. Applicants respectfully assert, inter alia, that outputting read code symbols to a turbo decoder, as recited in claim 1, outputting code symbols to decoders, as recited in claim 8, and the receiving, down-converting, converting, demodulating, storing and generating steps of claim 37 (for example, generating read addresses to read code symbols as a turbo decoder input) each produce a useful, concrete and tangible result.

The action should also clearly communicate the finding, conclusions and reasons which support them. *See MPEP § 2106(VII)*. The Examiner fails to show how the claims are not applied to appropriate subject matter. The Examiner merely makes a broad assertion that

the claims are not being applied to an appropriate subject matter, but fails to provide any explanation as to why the claimed subject matter is inappropriate.

Additionally, exemplary embodiments of the present invention indicate that to decode the code symbols ungrouping, sub-block de-interleaving and symbol de-separation, the receiver needs buffers for the respective operations and thus a problem that the total processing time is lengthened may occur.

Exemplary embodiments of the present invention have technical features that each time the receiver receives a sub-packet, it stores the code symbols of the sub-packet in a buffer, reads them in the output order of the turbo encoder such that sub-block ungrouping, sub-block de-interleaving and symbol de-separation occur equivalently, and then feeds the read code symbols to a turbo decoder.

For these operations, a receiver according to exemplary embodiments of the present invention may be equipped with at least three memories for storing system symbols and parity symbols in parallel, generates read addresses to read the code symbols according to the size of the EP, reads the code symbols at the read address from the memories and outputs the read code symbols to the turbo decoder. Exemplary embodiments of the present invention teach receiving the sub-packets in parallel, storing them in memories, and reading code symbols from the memories according to the packet size, and thus the memories are efficiently used. Accordingly, claims 1 to 17 provide useful, concrete and tangible concepts at least for these reasons.

For claims 18-36, the Examiner alleges the “claims call for a seemingly patentable process but in reality seeking patent protection on an abstract idea as evidenced by claims 1-17, 37-42.” However, the Examiner does not provide any explanation, legal and/or factual basis for the allegation. The Applicants assert that the features of claims 18-36 describe patentable subject matter because the features do not describe an abstract idea.

Accordingly, the Applicants respectfully request the Examiner to withdraw the rejection under 35 USC § 101.

Subject Matter Analysis

The Examiner failed to provide a disposition of the claims under 35 USC § 102 and/or 103.

According to MPEP § 2106, if the USPTO personnel can establish a prima facie case that a claim does not fall into a statutory category, the patentability analysis does not end

there. USPTO personnel must further continue with the statutory subject matter analysis and **must still examine the claims for compliance with 35 USC § 102, § 103 and § 112.** See *MPEP § 2106(IV)(B)*. Once the USPTO personnel have concluded the analysis of the claimed invention under all of the statutory provisions, including 35 USC § 101, § 112, § 102 and § 103, they should review all the proposed rejections and their bases to confirm that they are able to set forth a prima facie case of unpatentability. Only then should any rejection be imposed in an office action. The action should clearly communicate the finding, conclusions and reasons which support them. See *MPEP § 2106(VII)*.

The Examiner does not provide any evidence of a statutory subject matter analysis and/or examination of the claims because the Examiner does not provide a disposition of the claims under 35 USC § 102 and/or 103. The Examiner merely provides a minimal disposition under 35 USC § 112 (see details below). Applicants respectfully request that if the Examiner does not pass this application for allowance in the next office action, that the Examiner make the next office action non-final so that Applicant can be afforded an opportunity to respond.

Rejection of claims 1-42 under 35 USC § 112(1)

The Applicants respectfully traverse this rejection.

The Examiner alleges that the claimed invention “is not supported by either an asserted utility or a well established utility for the reasons set forth above.” However, first, there are no reasons “set forth above” (as alleged by the Examiner) that the claimed invention is not supported by either an asserted utility or well established utility. Next, the Examiner alleges that “one skilled in the art clearly would not know how to use the claimed invention.” However, the Examiner fails to provide even a minimal explanation as to why it’s clear that one skilled in the art would not know how to use the claimed invention. Applicants respectfully request some explanation for the Examiner’s allegation. Applicants assert that one of ordinary skill in the art would know how to use the claimed invention because the claims in view of the specifications contain a written description of the invention, as required by 35 USC 112(1). For example, a utility of the claimed features among other utilities can be to apply data to the input of a decoder, as recited in the claims and stated in the field of the invention, among other places in the application.

For these reasons, Applicants respectfully request that the Examiner withdraw the rejection under 35 USC 112.

Drawing Objection under 37 CFR 1.83(a)

The Examiner objected to the drawings, alleging that the drawings must show every feature of the invention specified in the claims. However, the Examiner fails to show what claimed features are not shown in the drawing. Applicants assert that the drawings are in compliance to U.S. Patent and Trademark rules and laws and do not need to be corrected. If the Examiner maintains this objection, Applicants respectfully request the Examiner to provide a detailed explanation of the noncompliant features.

Accordingly, the Applicants request the Examiner to withdraw the objection under 37 CFR 1.183.

In summary, Applicants believe that the office action is incomplete at least because it fails to provide substantive dispositions under 35 USC 102 and/or 103 and all of the rejections and objections are baseless at least because they fail to provide any explanation for the Examiner's allegations. Applicants respectfully request that if the Examiner does not pass the application for allowance, then the Examiner issue a new non-final office action that is substantively complete and/or provide detailed explanations for the Examiner's dispositions

Conclusion

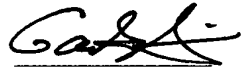
In view of the above, it is believed that the above-identified application is in condition for allowance, and notice to that effect is respectfully requested. Should the Examiner have any questions, the Examiner is encouraged to contact the undersigned at the telephone number indicated below.

A one month extension fee is believed to be due with this submission, and has been paid. If any other fees are required, the Patent Office is authorized to charge any fees required by this submission to Deposit Account No. 18-2220.

Appl. No. 10/718,816
Reply to office action of February 12, 2007
Response filed June 12, 2007

Respectfully submitted,

Date: June 12, 2007

A handwritten signature in black ink, appearing to read 'Gautam Sain', with a horizontal line drawn underneath it.

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